

## **CLAIMS**

1. A passive repeating plyometric muscle strengthening method comprising: a trainee stands on a pedal which is adjustably moved up and down repeatedly under a load for exercising, said trainee is continuously born with said load for  
5 exercising in a passive mode to do a plyometric and eccentric contraction muscle training in a short time with a large amount of acting units.

2. A passive repeating plyometric muscle strengthening  
10 method as claimed in claim 1, wherein, speed of repeated up and down moving of said pedal is set between 1 and 1000 times per minute.

3. A passive repeating plyometric muscle strengthening method as claimed in claim 1, wherein, said pedal is movably  
15 slipped over a plurality of upright posts on the surface of a plate seat, and is driven by an electric motor to move up and down, a load bearing rack is provided on said upright posts.

4. A passive repeating plyometric muscle strengthening method as claimed in claim 3, wherein, rotating rate of said  
20 motor is set between 1 rpm and 1000 rpm.

5. A passive repeating plyometric muscle strengthening method as claimed in claim 3, wherein, rotating rate of said motor is controlled by a variable resistance adjuster connected to

the outside.

6. A passive repeating plyometric muscle strengthening method as claimed in claim 3, wherein, said electric motor drives a transmission wheel, a follower rod has one end thereof linked  
5 up with said pedal, while the other end thereof is connected eccentrically to said rotating wheel.

7. A passive repeating plyometric muscle strengthening method as claimed in claim 6, wherein, said follower rod is of one of various lengths to connect to different one among a  
10 plurality of eccentric positions on said rotating wheel for controlling the stroke of raising/lowering of said pedal.

8. A passive repeating plyometric muscle strengthening apparatus, said apparatus is comprised at least:

a pedal which is moved up and down repeatedly;  
15 a plurality of upright posts connected to said pedal, said load bearing rack is provided on said upright posts;

a plate seat connecting said upright posts and said load bearing rack; and

a power mechanism for driving up/down moving of said  
20 pedal, said mechanism is provided with a device adapted to controlling the amplitude of up and down moving and rotating rate of said pedal.

9. A passive repeating plyometric muscle strengthening

apparatus as claimed in claim 8, wherein, said power mechanism includes an electric motor provided below said pedal to drive a transmission wheel, a follower rod has one end thereof linked up with said pedal, while the other end thereof is connected  
5 eccentrically to said rotating wheel.

10. A passive repeating plyometric muscle strengthening apparatus as claimed in claim 8, wherein, rotating rate of said electric motor is controlled by a variable resistance adjuster connected to the outside.

10 11. A passive repeating plyometric muscle strengthening apparatus as claimed in claim 9, wherein, the amplitude of up and down moving of said pedal is determined in pursuance of the length of said follower rod and the position that said follower rod is connected eccentrically to said rotating wheel.

15 12. A passive repeating plyometric muscle strengthening apparatus as claimed in claim 8, wherein, said load bearing rack is comprised of a pair of "H" shaped rack members which are provided respectively with lines of adjustment holes for receiving therein holding rods.

20 13. A passive repeating plyometric muscle strengthening apparatus as claimed in claim 8, wherein, said plate seat is provided on the bottom surface thereof with rollers at the four corners and with a screw foot.

14. A passive repeating plyometric muscle strengthening apparatus as claimed in claim 9, wherein, said electric motor is set at a rotating rate between 1.5 rpm to 150 rpm.

15. A passive repeating plyometric muscle strengthening apparatus as claimed in claim 8, wherein, speed of repeated up and down moving of said pedal is set between 30-300 times per minute.

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